FRAMEWORKS FOR EFFICIENT REPRESENTATION OF STRING OBJECTS IN JAVA PROGRAMMING ENVIRONMENTS

ABSTRACT OF THE DISCLOSURE

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Improved techniques for representation of Java string objects are disclosed. The techniques are especially useful for representing Java objects in Java computing environments and can thereby improve the performance of a virtual machine, especially those operating with relatively

10   limited resources (e.g., embedded systems with relatively smaller memory and computing power). The techniques can be implemented to create Java string objects as arrays of one-byte characters when it is appropriate. To create Java string objects, an enhanced constructor can be provided in a Java library that is available to application programs (or programmers). In

15   addition, enhanced Java methods can also be provided in the Java library. An array representation flag can optionally be allocated in the Java string object representation. The array representation flag can indicate whether the Java string object is allocated as an array of one-byte or an array of two-byte characters. Alternatively, the element type of the array can be

20   referenced by using one or more references to determine whether the Java string object has been allocated as an array of one-byte or as an array of two-byte characters.